(e) is a monomer component. It is further respectfully noted that the expression *"mixture"* is generally understood as referring to a combination of two or more components. Applicants' Claim 14 refers to *"a monomer mixture consisting of"* the monomers (a), (b), (d) and (e) in the specified weight percentages. Similar language is used in Claim 1, and it is not apparent to applicants in which regard the Examiner requires clarification of the subject matter defined in applicants' Claim 14.

On the other hand, the Examiner requested clarification of Claim 15 in view of the provisions of Claim 1 that the monomer(s) (b) be different from the monomer(s) (a) and that the monomer(s) (d) be different from the monomer(s) (a), (b) and (c). It is respectfully submitted that the provisions of Claim 1 are incorporated into Claim 15 by reference. The monomer(s) (b) referenced in Claim 15 are therefore also different from the referenced monomer(s) (a), and the referenced monomer(s) (d) of Claim 15 are therefore also different from the monomer(s) (a), (b) and (c). For completeness sake it is noted that the difference between the subject matter defined in Claims 1 and 15 resides in that the monomer mixture *"comprises"* the monomers (a) to (e) according to Claim 1, whereas the monomer mixture referenced in Claim 15 *"consists of"* the monomers (a) to (e).

In light of the foregoing it is respectfully requested that the rejection of Claims 14 and 15 under Section 112, ¶2, be withdrawn. Favorable action is solicited.

The Examiner rejected Claims 1 to 5, 11 and 14 under 35 U.S.C. §103(a) as being unpatentable in light of the teaching of ***Uhl et al.*** **(US 5,219,969)** which addresses cross-linked copolymers obtained by copolymerization of[1)]

(a) from 50 to 99 parts by weight of acrylic acid and/or methacrylic acid;

(b) from 1 to 50 parts by weight of at least one N-methylol (meth)acrylamide compound;

(c) from 50 to 10,000 ppm, based on the sum of the monomers (a) and (b), of a cross-linking monomer; and

(d) from 0 to 49 parts by weight of other monoethylenically unsaturated monomers.

On the one hand, the Examiner acknowledged that the copolymers refer-

1) Cf. col. 2, indicated lines 22 to 59, of ***US 5,219,969***.

enced in applicants' claims are not within the definition of the copolymers addressed in the teaching of ***Uhl et al.*** in light of applicants' requirement that unsaturated acid or unsaturated anhydride monomers (c) be present in no more than 40% by weight[2] and ***Uhl et al.***'s requirement that the acid(s) (a) constitute from 50 to 99 parts by weight. On the other hand, the examiner took the position that applicants' polymers were *"encompassed"* by the teaching of ***Uhl et al.***[3]. It is respectfully urged that the two positions are incompatible. Either claimed subject matter is distinguished from a generic prior art disclosure in which case the claimed subject matter is not *"encompassed"* by the generic disclosure, or claimed subject matter falls within the realm of a generic definition provided by a prior art disclosure in which case the claimed subject matter is *"encompassed"* by the prior art disclosure. The copolymer defined in applicants' claims in not within the realm of the generic definition of ***Uhl et al.***'s copolymers in light of applicants' requirement that the unsaturated acid or unsaturated anhydride monomer(s) (c) be present in no more than 40% by weight. Accordingly, the subject matter defined in applicants' claims is not *"encompassed"* by the disclosure of ***Uhl et al.*** as the Examiner would have it. Where the subject matter defined in applicants' claims is concerned, the question under Section 103(a) is therefore not whether a person having ordinary skill in the art would have been motivated *"to prepare and use the composition of Uhl"*[4]. The question under Section 103(a) here is whether a person of ordinary skill in the art would have been motivated to change the amount of the acrylic acid and/or methacrylic acid monomer(s) (a) of the copolymers addressed by the teaching of ***Uhl et al.*** in the manner which is necessary to arrive at the subject matter which is defined in applicants' claims, that is, whether a person of ordinary skill in the art would have been motivated to reduce the amount of acid monomer(s) from the range of from 50 to 99 parts by weight which is taught by ***Uhl et al.*** to an amount of less than 40% by weight as required in accordance with applicants' invention.

Moreover, such a change in the composition of a copolymer cannot reasonably be regarded as a mere optimization as the Examiner would have it[5]. A person of ordinary skill optimizes an amount of a consti-

2) Cf. page 2, lines 5 to 8, of the Office action.

3) Cf. page 3, lines 2 to 5, of the Office action.

4) Cf. page 3, lines 5 and 6, of the Office action.

5) Cf. page 3, lines 6 to 11, of the Office action.

tuent addressed in a prior art teaching when the prior art indicates that the amount of the constituent is directly involved in achieving a particular result[6]. Where the prior art fails to suggest or imply that the amount of a particular constituent is result effective, the motivation to modify the respective variable is lacking. Under those circumstances it cannot be considered obvious within the meaning of Section 103(a) to change the amounts of the particular constituent. The teaching of ***Uhl et al.*** does not provide anything which would have motivated a person of ordinary skill in the art to alter the amount of acid monomer(s) from the range of from 50 to 99 parts by weight which is taught by ***Uhl et al.*** to an amount of less than 40% by weight as required in accordance with applicants' invention, and the respective modification can, therefore, not be considered as a mere *"optimization"* as the Examiner would have it.

In light of the foregoing the Examiner's position is not deemed to be well taken that the subject matter of applicants' Claims 1 to 5, 11 and 14 was obvious under Section 103(a) in light of the teaching of ***Uhl et al.*** Favorable reconsideration of the Examiner's position and withdrawal of the respective rejection is therefore respectfully solicited.

The Examiner rejected Claims 1 to 15 under 35 U.S.C. §103(a) as being unpatentable in light of the teaching of ***Tropsch et al.*** (**US 5,869,032**). The Examiner noted in this context that the teaching of ***Tropsch et al.*** constituted prior art only under 35 U.S.C. §102(e)[7]. It is respectfully submitted that the patent of ***Tropsch et al.*** issued on *February 09, 1999*. The earliest filing date to which applicants' application is entitled is the date of the German priority application which was filed on **June 29, 1999**, and the earliest U.S. filing date to which the application is entitled is **June 26, 2000**. The patent of ***Tropsch et al.*** therefore qualifies as prior art not only under Section 102(e) but also under Sections 102(a) and 103(b).

With regard to the teaching of ***Tropsch et al.*** the Examiner takes the position that the *"composition of Tropsch et al. further comprises monomers selected from the group consisting of C_1-C_{12}-esters of acrylic or methcarylic acids ... [] are capable of acting as cross-*

---

6) A particular parameter must first be recognized as a result-effective variable, i.e., a variable which achieves a recognized result, before the determination of the optimum or workable ranges of said variable might be characterized as routine experimentation (*In re Antonie*, 559 F.2d 618, 195 USPQ 6 (CCPA 1977)).

7) Cf. page 3, line 18, to page 4, line 8, of the Office action.

linkers ..."[8]. It is firstly noted that the monomer(s) (e) referenced in applicants' claims are required to act as a cross-linker *and* are required to have *"at least two ethylenically unsaturated, nonconjugated double bonds"*.

It is further noted that the teaching of ***Tropsch et al.*** refers to *"C_1-C_{12}-alkyl esters"* of the referenced acids[9]. An alkyl group does not contain a double bond; the alkyl esters referenced by ***Tropsch et al.*** accordingly contain only one double bond and are not capable of acting as a cross-linker monomers corresponding to the monomer(s) (e) of applicants' copolymer as the Examiner would have it.

It is also noted that the *"alkylethylene glycol (meth)acrylates having 1 to 50 ethylene glycol units in the molecule"*[10] which are mentioned by ***Tropsch et al.*** equally fail to meet applicants' requirements concerning the monomer(s) (e). An ethylene glycol units is represented by formula $-O-CH_2-CH_2-O-$ and does not comprise any double bonds. The *"alkylethylene glycol (meth)acrylates having 1 to 50 ethylene glycol units in the molecule"* which are mentioned by ***Tropsch et al.*** therefore also contain no more than one double bond and cannot act as a cross-linker corresponding to the monomer(s) (e) of applicants' copolymer as the Examiner would have it.

The Examiner stated that *"tert.-butyl acrylate, ethyl acrylate or methacrylic acid"* meet the limitation of applicants' component (e)[11]. The Examiner's statement and the conclusions drawn by the Examiner which are based on that statement are clearly in error.

In light of the foregoing it is respectfully urged that the rejection of Claims 1 to 15 under Section 103(a) based on the teaching of ***Tropsch et al.*** be withdrawn. For the same reasons it is respectfully urged that the Examiner's rejection of Claims 1 to 15 under the judicially created doctrine of obviousness-type double patenting[12]

---

8) Cf. page 4, line 21, to page 5, line 2, of the Office action.

9) Cf. col. 2, indicated lines 39 to 45, of ***US 5,869,032***.

10) Cf. col. 2, indicated lines 50 to 52, of ***US 5,869,032***.

11) Cf. page 6, lines 5 to 18, of the Office action.

12) The determination of obviousness-type double patenting essentially involves a determination of unobviousness under 35 U.S.C. §103, with the exception that the patent disclosure is not applicable as "prior art" (Cf. In re Braat, 937 F.2d 589, 594, 19 USPQ2d 1289, 1293 (CAFC 1991); In re Vogel, 422 F.2d 438, 441-42, 164 USPQ 619, 622 (CCPA 1970)) and, corresponding to a determination of obviousness under Section 103, the *invention as a whole* (Cf. In re Antonie, 559 F.2d 618, 620, 195 USPQ 6, 8 (CCPA 1977)) must be considered when an analysis of obviousness-type double patenting is made.

based on Claims 1 to 13 of ***Tropsch et al.*** be withdrawn. Favorable action is solicited.

In light of the foregoing, applicants' Claims 1 to 15 are deemed to be patentable under the provisions of Sections 103(a) and 112, ¶2, of the Patent Act and under the doctrine of obviousness-tape double patenting, and the application is deemed to be in condition for allowance. Early action by the Examiner would be greatly appreciated.

Please charge any shortage in fees due in connection with the filing of this paper, including Extension of Time fees, to Deposit Account No. 14.1437. Please credit any excess fees to such deposit account.

Respectfully submitted,
NOVAK DRUCE DELUCA & QUIGG

Jason D. Voight
Reg. No. 42,205

1350 Connecticut Ave, N.W.
Washington, D.C. 20036
(202) 659-0100

JDV/BAS